

LISTING OF THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A layer system, comprising:

at least one functional layer formed from titanium aluminum oxide, wherein the at least one functional layer is interrupted by at least one intermediate layer formed from a different metal oxide than the at least one functional layer and wherein the at least one intermediate layer has a thickness from 0.3 nm to ~~[[10]]~~ 4.0 nm.

2-4. (Cancelled).

5. (Previously presented) The layer system as claimed in claim 1, wherein the at least one intermediate layer comprises silicon oxide.

6. (Previously presented) The layer system as claimed in claim 1, wherein the at least one intermediate layer has a refractive index equal to a refractive index of the at least one functional layer.

7. (Previously presented) The layer system as claimed in claim 6, wherein the at least one intermediate layer comprises zirconium oxide.

8. (Currently amended) A layer system, comprising:

at least one intermediate layer comprising titanium aluminum oxide, the at least one intermediate layer interrupting at least one functional layer formed from a different metal oxide than the at least one intermediate layer, wherein the at least one intermediate layer has a thickness from 0.3 nm to ~~[[10]]~~ 4.0 nm.

9-10. (Cancelled).

11. (Previously presented) The layer system as claimed in claim 8, wherein the at least one functional layer comprises silicon oxide.
12. (Previously presented) The layer system as claimed in claim 8, wherein the at least one functional layer has a refractive index equal to a refractive index of the at least one intermediate layer.
13. (Previously presented) The layer system as claimed in claim 12, wherein the at least one functional layer comprises zirconium oxide.
14. (Cancelled).
15. (Previously presented) The layer system as claimed in claim 1, wherein the at least one functional layer has a refractive index that can be set in a range of 1.55 to 2.50 by a quantitative ratio of titanium to aluminum.
16. (Previously presented) The layer system as claimed in claim 1, wherein the at least one functional layer comprises a plurality of functional layers.
17. (Previously presented) The layer system as claimed in claim 28, wherein the plurality of functional layers of high refractive index comprise titanium aluminum oxide.
18. (Previously presented) The layer system as claimed in claim 17, wherein the plurality of functional layers of low refractive index comprise silicon oxide.
19. (Previously presented) The layer system as claimed in claim 18, wherein the plurality of functional layers of high refractive index are interrupted by a plurality of intermediate layers of low refractive index comprising silicon oxide.

20. (Previously presented) The layer system as claimed in claim 1, wherein the at least one functional layer is produced by chemical vapor deposition processes.

21. (Previously presented) The layer system as claimed in claim 1, wherein the at least one functional layer is produced by physical vapor deposition processes.

22. (Previously presented) The layer system as claimed in claims 1, wherein the at least one functional layers is produced by sol-gel processes.

23. (Previously presented) The layer system as claimed in claim 1, wherein the layer system is usable as a coating for an illumination body.

24. (Previously presented) The layer system as claimed in claim 23, wherein the illumination body is an IRC lamp or an IRC torch.

25. (Previously presented) The layer system as claimed in claim 1, wherein the layer system is usable as a coating for a reflector.

26. (Previously presented) The layer system as claimed in claim 25, wherein the reflector is a glass-ceramic reflector.

27. (Cancelled).

28. (Previously presented) The layer system as claimed in claim 1, wherein the layer system comprises an alternating layer system comprising a plurality of functional layers of high refractive index and a plurality of functional layers of low refractive index.

29. (Previously presented) The layer system as claimed in claim 18, wherein the plurality of functional layers of low refractive index are interrupted by a plurality of intermediate layers of high refractive index comprising titanium aluminum oxide.

30. (New) The layer system as claimed in claim 1, wherein the at least one intermediate layer has a thickness from 0.3 nm to 4.0 nm.

31. (New) The layer system as claimed in claim 8, wherein the at least one intermediate layer has a thickness from 0.3 nm to 4.0 nm.

32. (New) A layer system, comprising:
at least one titanium aluminum oxide layer, the at least one titanium aluminum oxide layer comprising a ratio of Ti:Al of between 3.84:1 and 1:23; and
at least one intermediate layer comprising a different metal oxide than the at least one titanium aluminum oxide layer.

33. (New) The layer system as claimed in claim 32, wherein the at least one intermediate layer has a thickness from 0.3 nm to 10.0 nm.

34. (New) The layer system as claimed in claim 32, wherein the at least one intermediate layer has a thickness from 0.5 nm to 4.0 nm.